

REVISED VERSION

(19) World Intellectual Property Organization
International Bureau(43) International Publication Date
24 February 2005 (24.02.2005)

PCT

(10) International Publication Number
WO 2005/016817 A3(51) International Patent Classification⁷: COIB 21/14(21) International Application Number:
PCT/JP2004/0 11854

(22) International Filing Date: 12 August 2004 (12.08.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
2003-293143 13 August 2003 (13.08.2003) JP
60/496,666 21 August 2003 (21.08.2003) US
2004-020217 28 January 2004 (28.01.2004) JP
60/541,070 3 February 2004 (03.02.2004) US(71) Applicant (for all designated States except US): **SHOWA DENKO K. K.** [JP/JP]; 13-9, Shibadaimon 1-chome, Minato-ku, Tokyo 1058518 (JP).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **AOKI, Takanori** [JP/JP]; c/o Production & Technology Control Department, Gases & Chemicals Division, Showa Denko K. K., 5-1, Ogimachi, Kawasaki-ku, Kawasaki-shi, Kanagawa 2100867 (JP). **HIRO, Toshitaka** [JP/JP]; c/o Production & Technology Control Department, Gases & Chemicals Division, Showa Denko K. K., 5-1, Ogimachi, Kawasaki-ku, Kawasaki-shi, Kanagawa 2100867 (JP).(74) Agent: **SUZUKI, Shunichiro**; S. Suzuki & Associates, Gotanda Yamazaki Bldg. 6F, 13-6, Nishigotanda 7-chome, Shinagawa-ku, Tokyo 1410031 (JP).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— with international search report

(88) Date of publication of the international search report:
22 December 2005Date of publication of the revised international search report:
23 February 2006(15) Information about Correction:
see PCT Gazette No. 08/2006 of 23 February 2006, Section π

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: **PROCESS FOR PRODUCING HYDROXYLAMINE**

(57) Abstract: It is an object of the present invention to provide a process for producing a hydroxylamine by reacting a salt of hydroxylamine with an alkali compound, where the yield reduction due to formation of a complex between the produced hydroxylamine and a salt produced as a by-product or adsorption of the hydroxylamine to the by-product salt is decreased, and a high-concentration and high-purity hydroxylamine is safely produced at a high yield. The process for producing a hydroxylamine of the present invention comprises a reaction step of reacting a salt of hydroxylamine with an alkali compound to obtain a hydroxylamine while keeping the reaction solution at a pH of 7 or more, a purification step of purifying the hydroxylamine by ion exchange, and a concentration step of concentrating the hydroxylamine by distillation at the column bottom.

WO 2005/016817 A3